

REMARKS

Claims 4 and 18 have been amended to correct a grammatical error. No new matter has been introduced.

Claims 1-33 are currently pending and under consideration. Claims 9-33 have been allowed.

Reconsideration of claims 1-8 is respectfully requested.

102(b) Rejections of claims 1-8:

Various embodiments of the present invention provide the advantage of saving energy and decreasing a size of a recycling apparatus by heating broken pieces of fluorescent lamps at a temperature no higher than the boiling point of mercury, for example (see paragraph [0053] of the specification of the present invention, for example).

At page 2 of the Office Action, claims 1-8 were rejected under 35 U.S.C. 102(b) as being anticipated by either JP2000-215811 (hereinafter referred to as “JP’811) or EP0420367 (hereinafter referred to as EP’367). The foregoing rejection is respectfully traversed. The Applicants respectfully submit that neither of the foregoing references relied upon discuss “heating broken pieces of fluorescent lamps at a temperature *of about 100°C to about 330°C* to form a gas containing a mercury vapor; cooling the gas containing the mercury vapor at a temperature *of about -38°C to about 0°C* to form a liquid mercury; and collecting the liquid mercury” as recited in claim 1, for example.

Regarding JP’811:

In contrast, JP’811 discusses a method of recovering mercury whereby mercury adhered waste chip tubes are fed from a feeder 1 to a heating part 20, then a rotary tubular body 8 of a furnace is heated by a gas burner 9 at the heating part 20 and *the temperature inside the tubular body 8 is controlled to be within a range of 350°C-500°C* (emphasis added) and mercury vapor which is generated in the heating part 20 is then cooled and recovered (see Abstract).

More specifically, JP’811 discloses that the mercury adhered waste chip tubes is heated at a temperature in a range of 350° C to 500° C which is higher than a boiling point of mercury and

lower than a melting point of mercury. In contrary, the present invention recites "heating broken pieces of fluorescent lamps at a temperature of about 100° to about 330°" and the temperature of about 100° C to about 330° C is lower than the boiling point of mercury. The specification of the present application discloses "when the first collection container 100a is heated at a temperature higher than the boiling point of mercury, lifetime of the first collection container 100a may be decreased and the evaporated gas may include impurities such as fluorescent material" (refer to page 6, lines 10-12 of the specification of the present application).

The Applicants respectfully submit that the mercury adhered waste chip tubes are heated at a temperature outside of the temperature range recited in claim 1 of the present invention, for example. Thus, the teachings of JP'811 are fundamentally different from those of the present invention.

Regarding EP'367:

In contrast EP'367 merely discloses a process for disposal of mercury-containing lamps provided with phosphor, whereby the lamps are divided into fractions, and the fraction containing the smallest constituents comprises mercury-containing phosphor fed to a furnace in which it is heated up and the resulting mercury vapor is fed with addition of a gas, to a condenser in which the mercury is condensed. The Ep'367 is silent with respect to "heating broken pieces of fluorescent lamps at a temperature *of about 100°C to about 330°C* to form a gas containing a mercury vapor; [and] cooling the gas containing the mercury vapor at a temperature of *about -38°C to about 0°C* to form a liquid mercury," as recite in claim 1.

Therefore, the Applicants respectfully submit that claims 1-8 patentably distinguish over the cited references for at least the reasons mentioned above. Thus, withdrawal of the 102(b) rejections is respectfully requested.

CONCLUSION:

All of the outstanding rejections are herein overcome. Reconsideration and withdrawal of all rejections and prompt issuance of a Notice of Allowance is respectfully requested. No new matter is added by way of the present Amendment and Remarks as support is found throughout the originally filed specification, claims, and drawings.

The Examiner is invited to contact Applicant's attorney at the below-listed phone number regarding this Response or otherwise concerning the present application.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,

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